



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/091,435

03/06/2002

Randy S. Uehran

DAKTRONICS

7679

7590

12/14/2004

Hugh D. Jaeger
Suite 302
1000 Superior Blvd.
Wayzata, MN 55391-1873

EXAMINER

KANG, DONGHEE

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,435

Applicant(s)

UEHRAN, RANDY S.

Examiner

Donghee Kang

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 7-10 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 7-10 are directed to the patentably distinct species (**display**) of the claimed invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **2-6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ih (US 6,417,017) in view of Wang (US 6,710,373).

Re claims **2-3**, Ih teaches a light emitting diode comprising (Fig.4):

An LED die having electrical connection leads connected thereto and extending therefrom; a molded body (A) of electrical insulating material encompassing the LED die and a portion of each of the electrical connection leads and thereby protecting the LED die from the environment and insulating and supporting each of the electrical connection leads, said molded body having a length and a cylindrical shape terminating in an upper domed portion through which light emitted from the LED die emanates; an extended length portion (B) formed of electrical insulating material extending from the molded body and making longer the length of the molded body, the extended length portion

encompassing an additional portion of each of the electrical connection leads and thereby further insulating and supporting each of the electrical connection leads, the extended length portion having a cylindrical shape matching the cylindrical shape of the molded body and a bottom which is planar in its entirety.

Ih does not explicitly teach the extended length of the light emitting diode insert into a printed circuit board. Wang teaches in Fig.9 the light emitting diode is inserted into the printed circuit board (30) with the entirely planar base bearing directly against and lying flush with the upper surface of the printed circuit board without the need for an interceding spacer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the light emitting diode into the printed circuit board in order to provide an operation signal to the light emitting diode.

Re claim 4, Ih teaches a light emitting diode comprising (Fig.4):

a LED die having electrical connection leads connected thereto and extending therefrom; a molded body (A) of electrical insulating material encompassing the LED die and a portion of each of the electrical connection leads and thereby protecting the LED die from the environment and insulating and supporting each of the electrical connection leads, said molded body having a base to an upper domed portion through which light emitted from the LED die emanates for viewing; a molded body extension (B) formed of electrical insulating material, the molded body extension being separate from the molded body and having a length bounded by a lower surface which is planar in its entirety and an upper surface, the molded body extension having a cylindrical shape between the entirely planar lower surface and the upper surface which matches the

cylindrical shape of the molded body, and the molded body extension further having individual holes for each of the electrical connection leads extending therethrough from the upper surface to the entirely planar lower surface, the molded body extension being fitted to the molded body with the individual holes receiving the electrical connection leads and with the upper surface abutting and being permanently affixed to the base of the molded body, the molded body extension thereby making longer the length of the molded body.

Ih does not explicitly teach the extended length of the light emitting diode insert into a printed circuit board. Wang in Fig.9 teaches the light emitting diode is inserted into the printed circuit board (30) with the entirely planar base bearing directly against and lying flush with the upper surface of the printed circuit board without the need for an interceding spacer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the light emitting diode into the printed circuit board as taught by Wang in Ih's device in order to provide an operation signal to the light emitting diode.

Re claim 5, Ih teaches the base of the molded body and the upper surface of the molded body extension are both planar.

Re claim 6, Ih as modified by Wang teaches the upper surface of the molded body extension is permanently affixed to the base of the molded body by adhesive.

Response to Arguments

4. Applicant's arguments filed 10-12-04 have been fully considered but they are not persuasive.

Applicant argues that there is no suggestion to combine the two references to meet the claimed subject matter except through obvious. This is not convincing.

Ih teaches substantially the claimed structure except for inserting LED body into printed circuit board. However, Wang teaches LED body is fastened with printed circuit board such that the main body of LED is connected with other circuit elements for bringing about the emitting action. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert LED body into the printed circuit board as taught by Wang in Ih's device in order to connect the LED body with other circuit elements so as to bring about the emitting action.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2811

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghee Kang whose telephone number is 571-272-1656. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donghee Kang, Ph.D.
Primary Examiner
Art Unit 2811

dhk